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ABSTRACT

A survey of college sophomores (N=671) at Georgetown University (District of Columbia) was conducted to measure the extent of their participation in intellectual pursuits and other complementary or competing activities. Principal components analysis was used to identify questions which measured underlying tendencies, and weighted indexes were created which measure intellectual orientation, social philosophy, social action, careerism, and sociability. The interrelationships of these factors were analyzed and students were differentiated on these scales by intended major, sex, religion, financial aid status, grade point average, and type of high school attended. Findings indicated an inverse relationship between intellectual orientation and career focus, a strong positive relationship between intellectual orientation and social philosophy, a significant negative correlation between intellectual orientation and sociability, and a significant positive relationship between career orientation and sociability. (Contains 17 references).
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STUDENTS' "INTELLECTUAL ORIENTATION":
ITS RELATIONSHIP TO SOCIAL PHILOSOPHY, CAREERISM, AND SOCIABILITY

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ABSTRACT

A survey of college sophomores was conducted to measure the extent of their participation in "intellectual" pursuits and other complementary or competing activities. Principal components analysis was used to identify questions which measured underlying tendencies, and weighted indexes were created which measure intellectual orientation, social philosophy, social action, careerism and sociability. The interrelationships of these factors were analyzed and students were differentiated on these scales by intended major, sex, religion, financial aid status, GPA and type of high school attended. Findings indicate an inverse relationship between intellectual orientation and career focus, a strong positive relationship between intellectual orientation and social philosophy, a significant negative correlation between intellectual orientation and "sociability", and a significant positive relationship between career orientation and sociability.

STUDENTS' "INTELLECTUAL ORIENTATION": ITS RELATIONSHIP TO SOCIAL PHILOSOPHY, CAREERISM, AND SOCIABILITY

The decline in students' interest in the humanistic aspects of higher education and an increase in focus on careers has been well documented (Astin, Green and Korn, 1987) and lamented (Bloom, 1987). At least partially in response to such evidence, Georgetown University's provost requested that a committee composed of faculty members and administrators assess the intellectual atmosphere of the campus, viz., "Are students being challenged? Is the creative talent of our bright students being developed? Are they reading? Are they discussing intellectual things with each other and with faculty? . . . and what is the impact of 'working' on their intellectual development?"

This paper considers reports of research on students' involvement in "intellectual" pursuits, summarizes a survey which was designed and administered at Georgetown University in 1989 to measure such involvement, describes a simple technique for summarizing survey results, and suggests avenues for further related research.

A considerable amount of research has been conducted regarding students' involvement in both academic/intellectual and extra-curricular activities. The ACE/CIRP Annual Freshman Survey asks a substantial number of questions about students' intellectual pursuits during high school, and various college outcomes instruments address these issues with seniors/alumni (ACT-COMP and The College Board's Evaluation Survey Service, for example). Katchadourian and Boli's major study (1985) followed a cohort through four years at Stanford, developing a four-fold typology of students characterized by the interplay of "intellectualism" and "careerism". Focusing on students' college level goals in individual courses, Stark, Shaw and Lowther (1989) have developed General Education and Career Orientation Scales similar to Katchadourian and Boli's characterizations. The most extensive research on students' actual activities during college is that of C. Robert Pace of UCLA. This study owes a substantial debt to his College Student Experiences Questionnaire (CSEQ) for the form and content of a number of questions which were used with his permission.

Development of the Survey

The committee decided to survey an entire sophomore class late in the spring semester, because it is then that these students are nearing completion of the general education curriculum but are not yet immersed in the study of a major field. The committee conducted "focus" sessions with fifteen randomly selected sophomores to determine their understanding of "intellectual" pursuits and to get a sense for their vocabulary in describing same. A draft survey was then field-tested with a group of sophomores who were asked to participate in a critique of its design and content. The final instrument was then distributed with pre-registration materials in late April. A total of 671 completed the survey, for an overall response rate of 50%. The respondents were representative of the class, with the exception that Business Administration students were slightly over-represented and students in the School of Languages and Linguistics were slightly under-represented; students with higher grade point averages were slightly over-represented. On other dimensions such as sex, type of high school attended, and religious background, the respondent population fell within acceptable margins of estimate.

Development of Indexes

Each question on the survey was designed to measure a specific activity or attitude. All questions which were presumed to measure "intellectual" attitude, activities, and pursuits were examined using principal components analysis to determine whether each did in fact measure the presumed underlying dimension. The analysis was run iteratively to reduce the number of questions in each group to a single cohesive set which describes the concept as parsimoniously as possible. Only those questions which had strong positive correlation coefficients were retained. The resulting "factor pattern scores", which are measures of the degree to which each individual item taps the common dimension, were then used to weight each student's response to the individual questions which comprise the index. The resulting additive scores yield a summary measure of each student's "intellectual orientation". Such indexes provide a convenient means of summarizing the results of the survey because they incorporate responses to a large number of questions in a single measure in

which each component has been weighted to reflect its contribution to the single underlying dimension.¹

Initially two sets of questions were identified, one of which was thought to measure intellectual orientation and one which was thought to measure orientation to career concerns. As the statistical analysis evolved, three additional factors emerged: social philosophy (orientation to issues of peace, human rights, and justice), social action (participation in volunteer service, political, and human rights organizations), and "sociability" (focus on friends, social life, and popularity). The items which comprise each of the five indexes and their relative weights are presented in Table 1.

Insert Table 1 about here

Intellectual Orientation

The average score on the intellectual orientation index was 15.99, with a standard deviation of 5.14. The maximum possible score was 40, although no student had a score above 32 (see Table 2). Significant differences were found between a number of categories of students as measured by the intellectual orientation index.²

- Index scores of students in the humanities, languages, and Foreign Service were significantly higher than those of students in the social sciences, the "hard" sciences, business and nursing.
- Females are more intellectually active than males.
- Transfer students have a higher intellectual orientation than do students who entered Georgetown as freshmen.

¹I am indebted to Dr. Beth Soldo, Associate Professor and Chair, Department of Demography, for both conceptual and practical advice on implementation of this process.

²All differences noted are significant at the .05 level.

- Students who aspire to a doctoral or law degree have higher scores than students whose highest degree goal is a bachelor's, master's, or MD degree.
- The intellectual orientation of students whose career goal is in business or health care is significantly lower than that of students whose career goals are in the arts, communication, education, government, or social services.

Insert Table 2 about here

Career Orientation

The questions which comprise the career orientation index suggest that students who have high scores place much greater emphasis on the practical value of their chosen major than do their classmates. The average career index was 6.72 of a possible 12.21 (SD 2.55).

- Business and nursing students are much more focused on careers than are students in all other majors. The average score for business students was three-fourths of a standard deviation above the mean, while the average for humanities students was an equal distance below the mean.
- Those who aspire to JD or master's degrees are significantly more career oriented than are those who aspire to doctorates.

Social Philosophy and Social Action

The social philosophy and social action indexes each correlate more strongly with the intellectual orientation index (.639 and .451, respectively) than they do with each other (.285). The social philosophy index has a weak, but negative correlation with career orientation, and the social action index has a similar negative correlation with the sociability index (see Table 3).

- Humanities and Foreign Service majors evince a higher concern for issues of human rights and justice than do majors in other fields.

- Students whose highest degree goal is a doctorate or MD degree score higher on the social philosophy scale than do students whose highest goal is a bachelor's or master's degree.
- Students who plan to work in government have significantly higher social philosophy scores than students who plan careers in business.
- Graduates of Catholic high schools have a greater concern for issues of social justice than do graduates of private independent schools; graduates of private schools have greater concern for such issues than do graduates of public high schools.
- Women are more involved in political, human rights, and volunteer organizations than are men.
- Those who aspire to doctoral degrees are more involved in social action than those whose highest goal is a bachelor's or master's degree. Those whose goal is a JD degree are significantly more involved than those whose goal is a bachelor's degree only.
- Those who plan careers in government are more involved in social causes than those who plan careers in business.

Sociability

Average sociability index scores were 11.58 of a possible 29.

- Business students scored higher on the sociability index than did students in the humanities; differences among the other major fields were not significant.
- Transfer students scored lower than students who entered the university as freshmen.
- Students who were receiving financial aid scored significantly lower on this index than did students who were receiving no financial aid.
- Students whose highest degree goal is a master's received higher scores than those whose highest goal is the doctorate.

Insert Table 3 about here

Intellectual vs. Career Orientation

The inverse relationship between intellectual and career orientation which was described earlier is made clear in Figure 1--the higher the scores on the intellectual orientation scale, the lower the scores on the career index. (Note that these are **average** scores by discipline; **individual** scores on the intellectual index range from 2.97 to 32.19 and on the career index from 0 to 12.21; see Table 2.)

Insert Figure 1 about here

Figure 2 plots the intersection of each student's scores on the two scales. The dotted lines on those charts represent the overall median values for each scale. Note that Business students cluster in the bottom right quadrant, denoting high career indexes and low intellectual orientation scores, while the humanities majors cluster in the upper left quadrant of the chart, because of their high intellectual indexes and low career scores. These charts underscore the differences among the disciplines which were noted in Figure 1. These findings are consistent with the Katchadourian/Boli research on students at Stanford and with Carnegie Commission-sponsored research on a national sample of college alumni (Spaeth and Greeley, 1970).

Insert Figure 2 about here

It is obvious that students in programs with a clear career focus are less intellectually active (as defined by the activities and interests which comprise the index) than students in the less career-specific majors. In the case of the business students, and somewhat less so for nursing, it must be assumed that this predilection existed before they arrived at Georgetown, since they have only taken a single course each semester in the area of their major. One may suppose that the lower level of intellectual activity among students in the "hard" sciences (primarily pre-med) is due to the rigor of

their studies and their reaction to the competitive atmosphere of medical school admissions.³ On issues of social philosophy and social action these students did not differ significantly from students in other disciplines.

Observations and Additional Questions

This analysis has attempted to characterize Georgetown University undergraduates in terms of their orientation to intellectual pursuits, and, in the process, found that students could be further characterized by their orientation to careers, their social philosophy, their involvement in social action, and their sociability. The strength and the direction of the correlations between these factors invited analysis in terms of dichotomies, both in terms of their scores on the indexes and in terms of discipline, sex, type of high school attended, and highest degree goal. Analysis in terms of mutual exclusivity overlooks the shared characteristics of those students who have high scores on two of the indexes which are being contrasted. Doctoral research being conducted at the University of Michigan suggests that first-generation college students have higher aspirations both for intellectual pursuits and for career goals, and that "non-directed" students (*c.f.*, Katchadourian's "unconnected" and Pace's "disengaged" typologies) are more likely to be second or third-generation college-goers.⁴ Subjective observation of Georgetown students suggests that similar considerations may be at play here.

The questions which this study leaves unanswered suggest two general avenues for future research:

- an investigation of the shared characteristics of students who have high scores on two seemingly dichotomous indexes to understand how they integrate apparently conflicting goals; and

³The survey found that science majors devote more time to preparing for class and much less time to the arts than their classmates.

⁴Letter from Kathleen M. Shaw to Joseph Pettit, January 13, 1990.

- a longitudinal investigation of the extent to which fulfillment of the general education requirements impacts students' involvement in "intellectual" activities.

Of further interest to Georgetown University is the question of whether the characteristics of matriculated students are representative of the entire applicant pool, and to what extent the admissions process itself pre-determines the characteristics found in this class of undergraduates.

Table 1: ITEMS WHICH COMPRISE THE INDEXES AND THEIR RELATIVE WEIGHTS

<u>Item #</u>	<u>Weight</u>
Intellectual Orientation Index	
50. Discussed fine arts with friends	.60441
21. Attended live theatre or dance performance	.59445
22. Attended lecture or seminar on campus	.56483
24. Attended an orchestral concert	.56175
46. Discussed ideas of writers/philosophers with friends	.54592
48. Discussed peace/human rights/equality/justice with friends	.51901
28. Visited an art gallery or museum	.49724
49. Discussed different life styles and customs with friends	.49329
43. Discussed politics/philosophy/religion with a faculty member	.47384
23. Attended a lecture or seminar off campus	.45777
54. Discussed social/ethical issues related to science/technology	.44820
5. Did extra (unassigned) work/reading for a course	.42079
30. Participated in a political/human rights organization	.41318
40. Talked with friends about an idea raised in a class	.41198
25. Wrote original poetry/novel/short story	.40067
29. Attended a poetry reading	.38808
26. Created original art work	.35783
42. Found ideas from one class gave greater insight into another	.33184
6. Read a novel or play for pleasure	.32172
11. Used a local (not Georgetown University) library	.31104
18. Participated in an academic club	.30959
27. Played musical instrument/performed vocal music	.29201
2. Read the editorial pages of a major newspaper	.31675
Career Orientation Index	
111. Chose major useful in establishing strong record or resume	.75361
107. Chose major useful in leading to a good job	.75228
119. Chose major/profession for associated social status	.66833
90. Importance of having a job waiting at graduation	.57964
93. Importance of having a career planned by graduation	.52156
112. Chosen major will allow a fuller social life	.45278
45. Discussed job prospects, money, careers with friends	.25717
Social Philosophy Index	
48. Discussed peace/human rights/equality/justice with friends	.62037
54. Discussed social/ethical issues related to science/technology	.56367
40. Talked with friends about an idea raised in a class	.45266
94. Importance of developing personal philosophy of social justice	.43303
109. Importance of major field's value to society	.40413
67. Participation in discussions of religious/ethical issues	.38794
4. Tutored another student	.19394
Social Action Index	
30. Participated in a political or human rights organization	.70025
19. Worked in a local, state, or national political campaign	.53921
71. Amount of time devoted to volunteer work/community service	.36489
Sociability Index	
51. Discussed campus social life with friends	.81851
53. Discussed movies and popular music with friends	.54641
45. Discussed job prospects, money, careers with friends	.48291
98. Importance of making lasting friendships in college	.25562
91. Importance of being a socially well-rounded person	.23930
85. Percent of time devoted to social activities	.20100
129. Most admires classmate who is popular with everyone	.12939

Table 2: AVERAGE INDEX SCORES BY STUDENT CATEGORY

	No.	Intellectual Orientation	Social Philosophy	Social Action	Career Orientation	Sociability
Average	635	15.99	7.99	1.89	6.72	11.58
Standard Deviation		5.14	1.96	1.29	2.55	3.11
Minimum		2.97	3.03	0.36	0.00	2.45
Maximum		32.19	12.94	6.78	12.21	25.10
Discipline						
Humanities	85	18.02	8.61	1.97	4.91	11.59
Languages	66	17.69	7.76	1.90	5.99	11.13
Foreign Serv.	140	17.47	8.39	1.91	6.11	11.17
Social Sci.	106	15.76	7.75	2.08	6.30	11.69
Science	41	14.38	8.59	1.61	6.42	11.08
Business	170	13.95	7.48	1.75	8.63	12.26
Nursing	27	13.89	7.86	2.01	7.79	10.90
Sex						
Female	330	16.87	8.16	2.03	6.66	11.67
Male	274	15.04	7.79	1.72	6.81	11.54
Entry Type						
Freshman	566	15.88	7.95	1.86	6.76	11.67
Transfer	48	17.60	8.40	2.22	6.27	10.54
High School						
Public	289	15.58	7.77	1.87	6.72	11.43
Jesuit	51	14.91	8.27	1.84	7.34	11.85
Other Catholic	109	16.52	8.50	1.94	6.81	11.51
Other Private	168	16.79	7.94	1.91	6.44	11.80
Highest Degree Sought						
Bachelor's	51	15.21	7.45	1.35	6.30	12.25
Master's	261	15.05	7.65	1.74	6.86	11.83
Doctorate	98	18.20	8.56	2.32	5.99	10.73
MD/DDS	49	15.48	8.69	1.81	6.87	11.19
LLB/JD	140	16.72	8.11	2.00	7.11	11.67

Table 3: CORRELATION COEFFICIENTS (Pearson)
 (** indicates significance at the .05 level)

	Intellectual Orientation	Social Philosophy	Social Action	Career Orientation	Sociability
Intellectual Orientation		.63874*	.45127*	-.15714*	-.09752*
Social Philosophy	.63874*		.28534*	-.09304*	-.00923
Social Action	.45127*	.28534*		-.03746	-.13799*
Career Orientation	-.15714*	-.09304*	-.03746		.20071*
Sociability	-.09752*	-.00923	-.13799*	.20071*	

Average Index Scores by Discipline

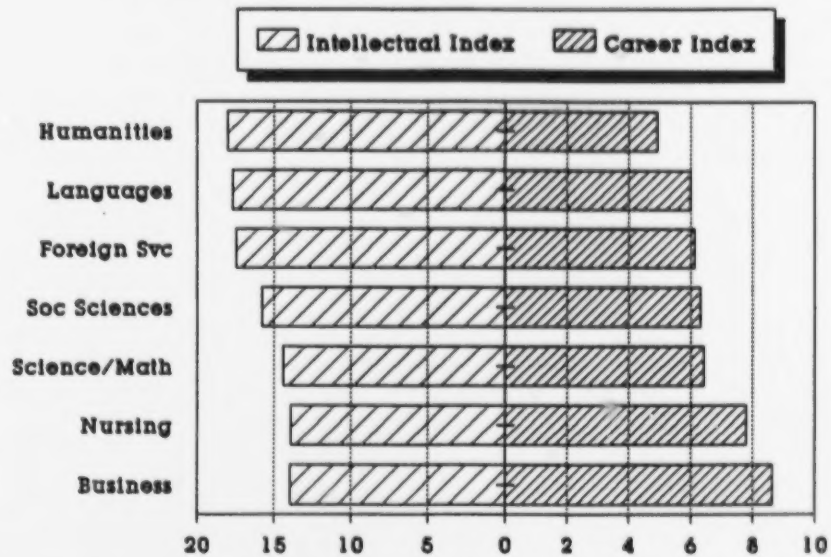


Figure 1 *Intellectual vs. Career Orientation*

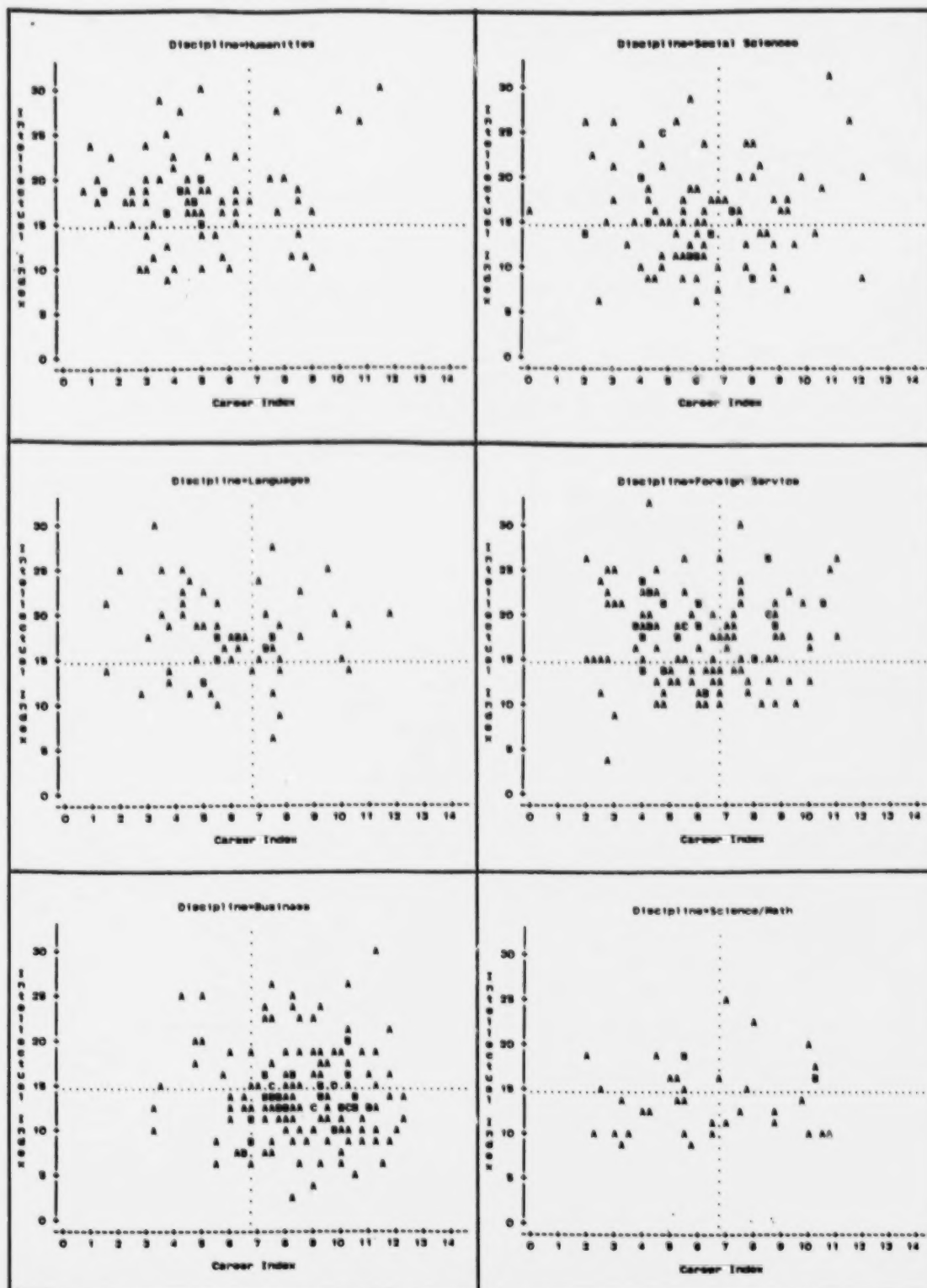


Figure 2 *Intellectual vs. Career Orientation* Legend: A=1 student; B=2 students, C=3 students, etc.

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